STATEMENT OF BASIS (AI No. 19580)

for draft Louisiana Pollutant Discharge Elimination System permit No. LA0077984 to discharge to waters of the State of Louisiana.

THE APPLICANT IS: Electroless Nickel Plating of Louisiana, Inc.
44211 Stein Road
Hammond, LA 70403

ISSUING OFFICE: Louisiana Department of Environmental Quality (LDEQ)
Office of Environmental Services
Post Office Box 4313
Baton Rouge, Louisiana 70821-4313

PREPARED BY: Yvonne Baker

DATE PREPARED: March 4, 2009

1. PERMIT STATUS

A. Reason For Permit Action:

Permit reissuance of a Louisiana Pollutant Discharge Elimination System (LPDES) permit for a 5-year term

B. NPDES permit – NPDES permit effective date: N/A
NPDES permit expiration date: N/A
EPA has not retained enforcement authority.

C. LPDES permits –
LPDES permit effective date: December 1, 2003
LPDES permit expiration date: November 30, 2008

D. Date Application Received: September 22, 2008

2. FACILITY INFORMATION

A. FACILITY TYPE/ACTIVITY - nickel and copper plating shop

This is an existing facility that performs nickel plating and copper plating to various metal substrates for oil production, chemical production, and medical equipment manufacturing facilities. The plating operation is mostly for corrosion prevention of the base metal. The nickel plating also provides a more wear resistant surface than the base metal. The copper plating is provided to a medical equipment manufacturer to create a conductive layer on the surface of a nuclear medicine machine. Electroless nickel-plating and copper plating process generates waste rinsewater. The waste stream is created by the cleaning and pre-treatment of steel for electroless nickel plating. The process is as follows: 1) parts are soak cleaned in an alkaline cleaner then rinsed; 2) parts are electro-cleaned in an alkaline cleaner then rinsed; 3) parts are dipped into 30% hydrochloric acid then rinsed; and 4) parts are nickel plated or copper plated. All parts are spray rinsed over chemical tanks to minimize dragout of chemicals before immersion rinsing.

B. FEE RATE
1. Fee Rating Facility Type: minor
2. Complexity Type: III
3. Wastewater Type: II
4. SIC code: 3471; 3479

C. LOCATION - 44211 Stein Road in Hammond, Tangipahoa Parish
Latitude 30° 29' 39", Longitude 90° 30' 06"

3. OUTFALL INFORMATION

Outfall 001

Discharge Type: treated sanitary wastewater
Treatment: aerobic digestion; trickling filtrations; settling
Location: at the point of discharge from the STP on the eastern side of the facility south of Outfall 002 prior to mixing with other waters
Flow: 500 GPD
Discharge Route: via ditch to Yellow Water River

Outfall 002

Discharge Type: treated process wastewater which includes treated nickel plating and copper plating rinse, alkaline cleaners, hydrochloric acid, spent plating solution, and boiler blowdown water
Treatment: pH neutralization, addition of sodium hypophosphite to precipitate nickel out of the plating solution, and cation exchange to remove any remaining nickel out of the solution
Location: at the point of discharge from the eastern side of the facility north of Outfall 001 prior to mixing with other waters
Flow: 1000 GPD
Discharge Route: via ditch to Yellow Water River

Outfall 003

This outfall has been deleted.

Outfall 004

This outfall has been deleted.

Outfall 005

This outfall has been deleted.

In accordance with LAC 33:IX.2511.A.1, discharges composed of storm water "...shall be required to obtain an LPDES permit except... discharges associated with industrial activity." In accordance with LAC 33:IX.2511.B.14, facilities classified as SIC code 3471 are considered to have stormwater discharges associated with industrial activity.

Based on good compliance history in years 2006, 2007, and 2008 and because the Stormwater Pollution Prevention Plan addresses the discharges from these areas, outfalls 003, 004, and 005 have been deleted.

4. RECEIVING WATERS

STREAM - via ditch to Yellow Water River

BASIN AND SEGMENT - Lake Pontchartrain Basin, Segment 040504

Critical Flow, (cfs): 0.3
Receiving Stream Hardness (mg/L): 25.3
Receiving Stream TSS (mg/L): 4.45

DESIGNATED USES - a. primary contact recreation
b. secondary contact recreation
c. propagation of fish and wildlife

5. TMDL STATUS

Subsegment 040504, Yellow Water River-From headwaters to Ponchatoula Creek, is listed on LDEQ's Final 2006 303(d) List as impaired for phosphorus (EPA Category 5), organic enrichment/ low DO (EPA Category 5), TDS, and pathogen indicators. To date no TMDLs have been completed for this waterbody. A reopener clause will be established in the permit to allow for the requirement of more stringent effluent limitations and requirements as imposed by a TMDL. Until completion of TMDLs for the Lake Pontchartrain Basin, those suspected causes for impairment which are not directly attributed to the metal finishing point source subcategory have been eliminated in the formulation of effluent limitations and other requirements of this permit. Additionally, suspected causes of impairment which could be attributed to pollutants which were not determined to be discharged at a level which would cause, have the reasonable potential to cause or contribute to an excursion above any present state water quality standard were also eliminated.

The discharges from this facility have the potential to discharge pollutants which may contribute to organic enrichment/low DO, TDS, and pathogen indicator impairments of the receiving waterbody. The organic enrichment/ low DO impairment shall be addressed through the BOD_5 parameter on Outfall 001; TSS, COD, and Ammonia parameters on Outfall 002; and the SWPPP for the stormwater runoff. A reporting requirement for TDS has been retained from the previous permit to gather data to verify the need for a TDS limit. The pathogen indicator impairment shall be addressed through the fecal coliform parameter on Outfall 001. Compliance with the limitations established in the permit should not result in the discharge of pollutant concentrations which would cause or contribute to further impairment of water quality standards.

6. PROPOSED EFFLUENT LIMITS

BASIS - See Rationale below.

Changes made from previous permit:

A. Outfalls 003, 004, and 005 were deleted.
B. Water Quality Based limitations were calculated for Total Cadmium, Total Copper, Total Cyanide, Total Lead and Total Zinc.
C. Technology Based limitations were used for Total Nickel.
D. TTO limit with monitoring waiver option was added to Outfall 002.

7. COMPLIANCE HISTORY/COMMENTS

A. OEC – A Compliance Inspection on March 26, 2007 noted the following areas of concern:

1. DMR review noted 3 exceedances in permit limitations;

2. The appearance of Outfall 001 was blackish with slight smell, no sheen detected, no solids present, Outfall 002 was clear with no smell, no sheen and no solids, Outfall 003 was brownish and clear with no smell, no sheen, and no solids present, Outfall 004 was greenish with no smell, no sheen and no solids present and Outfall 005 had no activity;

3. Sample results taken at time of inspection showed BOD and TSS values well over permitted limits for Outfall 001.

A Notice of Deficiency letter was issued in response to areas of concern noted in above inspection.

The facility submitted a response with necessary steps to correct problems noted in above deficiency letter on August 21, 2007.

A Deficiency Clear letter was issued October 10, 2007.

B. DMR Review/Excursions – A DMR Review from August 2006 through September 2008 was conducted and the following exceedances in permit limitations were noted:

Date	Parameter	Outfall	Reported Value	Permit Limits
02/06	Fecal Coliform	001	230 col/100 mL	200 col/100 mL
06/06	Fecal Coliform	001	230 col/100 mL	200 col/100 mL
06/06	Ammonia	002	8.35 mg/L	5 mg/L
08/07	Fecal Coliform	001	210 col/100 mL	200 col/100 mL
03/08	Copper	002	0.026 mg/L	0.023 mg/L

8. EXISTING EFFLUENT LIMITS

Outfall 001 – treated sanitary wastewater

Pollutant	Monthly Average	Weekly Average	Frequency
Flow	Report	Report	monthly
BOD_5	30 mg/L	45 mg/L	monthly
TSS	30 mg/L	45 mg/L	monthly
Fecal Coliform	200 col/100ml	400 col/100ml	monthly
pH Min/Max Values	6.0 (min)	9.0 (max)	monthly

Outfall 002 – treated process wastewater which includes treated nickel plating and copper plating rinse, alkaline cleaners, hydrochloric acid, spent plating solution, and boiler blowdown water

Pollutant	Monthly Average	Daily Maximum	Frequency
Flow	Report	Report	quarterly
pH	6.0 s.u. (min)	9.0 s.u. (max	quarterly
TSS	30 mg/L	45 mg/L	quarterly
Oil and Grease	---	15 mg/L	quarterly
COD	200 mg/L	300 mg/L	quarterly
Ammonia (as N)	---	5 mg/L	quarterly
Total Cyanide	0.65 mg/L	1.20 mg/L	semiannually
Total Cadmium	Report	0.017 mg/L	semiannually
Total Chromium	1.71 mg/L	2.77 mg/L	semiannually
Total Copper	Report	0.023 mg/L	semiannually
Total Lead	Report	0.017 mg/L	semiannually
Total Nickel	Report	0.50 mg/L	quarterly
Total Silver	0.24 mg/L	0.43 mg/L	semiannually
Total Zinc	Report	0.17 mg/L	Semiannually
TDS	Report	Report	quarterly

Outfall 003 – stormwater runoff from the side lawn
Outfall 004 – stormwater runoff from the north side of the facility
Outfall 005 – stormwater runoff from the backyard

Pollutant	Monthly Average	Daily Maximum	Frequency
Flow	---	Report	quarterly
TOC	---	50 mg/L	quarterly
Oil & Grease	---	15 mg/L	quarterly
pH Min/Max Values	6.0 (min)	9.0 (max)	quarterly

9. ENDANGERED SPECIES

The receiving waterbody, Subsegment 040504 of the Lake Pontchartrain Basin is not listed in Section II.2 of the Implementation Strategy as requiring consultation with the U.S. Fish and Wildlife Service (FWS). This strategy was submitted with a letter dated November 17, 2008 from Rieck (FWS) to Nolan (LDEQ). Therefore, in accordance with the Memorandum of Understanding between the LDEQ and the FWS, no further informal (Section 7, Endangered Species Act) consultation is required. The effluent limitations established in the permit ensure protection of aquatic life and maintenance of the receiving water as aquatic habitat. Therefore, the issuance of the LPDES permit is not likely to have an adverse effect on any endangered or candidate species or the critical habitat.

10. HISTORIC SITES

The discharge is from an existing facility location, which does not include an expansion on undisturbed soils. Therefore, there should be no potential effect to sites or properties on or eligible for listing on the National Register of Historic Places, and in accordance with the "Memorandum of Understanding for the Protection of Historic Properties in Louisiana Regarding LPDES Permits" no consultation with the Louisiana State Historic Preservation Officer is required.

11. TENTATIVE DETERMINATION

On the basis of preliminary staff review, the Department of Environmental Quality has made a tentative determination to issue a permit for the discharge described in the application.

12. PUBLIC NOTICES

Upon publication of the public notice, a public comment period shall begin on the date of publication and last for at least 30 days thereafter. During this period, any interested persons may submit written comments on the draft permit and may request a public hearing to clarify issues involved in the permit decision at this Office's address on the first page of the statement of basis. A request for a public hearing shall be in writing and shall state the nature of the issues proposed to be raised in the hearing.

Public notice published in:

Local newspaper of general circulation

Office of Environmental Services Public Notice Mailing List

Rationale for Electroless Nickel Plating of Louisiana, Inc.

1. **Outfall 001** - treated sanitary wastewater (estimated flow is 500 GPD)

Pollutant	Limitation		Reference
	Monthly Avg	Weekly Avg	
	mg/L		
Flow (GPD)	---	Report	
BOD_5	30	45	Similar discharges (BPJ), LAG530000
TSS	30	45	Similar discharges (BPJ), LAG530000
Fecal Coliform colonies/100ml	200	400 (Daily Max)	Similar discharges (BPJ), LAG530000
pH, s.u.	6.0 (min)	9.0 (max)	Similar discharges (BPJ), LAG530000

Treatment: aerobic digestion; trickling filtrations; settling

Monitoring Frequency: Monthly for all parameters at the point of discharge from the STP on the eastern side of the facility south of Outfall 002 prior to mixing with other waters.

Limits Justification: Limits and monitoring frequencies are based on current guidance for similar discharges from other industrial facilities, the Class I Sanitary Discharge General Permit, LAG530000 effective November 1, 2007, and the previous permit.

2. **Outfall 002** -treated process wastewater which includes treated nickel plating and copper plating rinse, alkaline cleaners, hydrochloric acid, spent plating solution, and boiler blowdown water (estimated flow is 1000 GPD)

Pollutant	Limitation		Reference
	Monthly Avg	Daily Max	
	mg/L		
Flow (GPD)	Report	Report	LAC 33:IX.2707.I.1.b
TSS	30	45	BPJ, similar discharges, previous permit
Oil and Grease	---	15	BPJ, similar discharges, previous permit
COD	200	300	BPJ, similar discharges, previous permit
Ammonia (as N)	---	5	BPJ, similar discharges, previous permit
Total Cadmium	0.22	0.51	Water Quality Based Limit
Total Chromium	1.71	2.77	BPJ, previous permit, 40 CFR 433.14(a)
Total Copper	0.11	0.26	Water Quality Based Limit
Total Cyanide	0.39	0.93	Water Quality Based Limit
Total Lead	0.35	0.84	Water Quality Based Limit
Total Nickel	2.38	3.98	BPJ, 40 CFR 433.14(a)
Total Silver	0.24	0.43	BPJ, previous permit, 40 CFR 433.14(a)
Total Zinc	0.90	2.14	Water Quality Based Limit
Total Dissolved Solids (TDS)	Report	Report	BPJ, previous permit, as per 303(d) list of impaired water bodies
TTO [1,2]	---	2.13	BPJ, 40 CFR 433.14(a)
pH (s.u.)	6.0 (min)	9.0 (max)	BPJ, similar discharges, previous permit

Footnotes:

1. The term "TTO" means total toxic organics, which is the summation of all quantifiable values greater than 0.01 milligrams per liter for the toxic organics listed in Part II, paragraph F, in the groups DIOXIN, VOLATILE COMPOUNDS, ACID COMPOUNDS, BASE/NEUTRAL COMPOUNDS, and PESTICIDES.

2. Conditions for waiver of monitoring requirement, per 40 CFR 433.12, are applicable; see "TTO Monitoring Requirements" below.

Treatment: pH neutralization, addition of sodium hypophosphite to precipitate nickel out of the plating solution, and cation exchange to remove any remaining nickel out of the solution

Monitoring Frequency: Quarterly for flow, TSS, oil and grease, COD, Ammonia, Total Nickel, TDS, TTO, and pH; and semiannually for Total Cadmium, Total Chromium, Total Copper, Total Cyanide, Total Lead, Total Silver, and Total Zinc at the point of discharge from the eastern side of the facility north of Outfall 001 prior to mixing with other waters.

Limits Justification: Limits and monitoring frequencies are based on BPJ, current guidance for similar discharges from other industrial facilities, the previous LPDES permit, and 40 CFR 433.14(a). Water quality based limitations were calculated for Total Cadmium, Total Copper, Total Cyanide, Total Lead, and Total Zinc.

EPA Guidelines at 40 CFR 433.14 (a) for the Metal Finishing Subcategory are applicable. However, technology-based effluent limitations and/or specific analytical results from the permittee's application were screened against state water quality numerical standard based limits by following guidance procedures established in the Permitting Guidance Document for Implementing Louisiana Surface Water Quality Standards, LDEQ, April 16, 2008. **Calculations, results, and documentation are given in Appendix A.**

During the previous LPDES permit issuance, it was determined that certain more stringent permit limitations were addressed in the initial NPDES permit (issued May 24, 1989) and/or the state permit number WP1077 (Issued September 9, 1991) for total cadmium, total copper, total lead, total nickel, and total zinc based on water quality. Because the receiving water characteristics change over several permit cycles, the technology based effluent limitations were screened using the current critical flow for the receiving stream and numerical criteria.

BPJ Best Professional Judgement
su Standard Units

TTO MONITORING REQUIREMENTS

In accordance with 40 CFR 433.12, in lieu of requiring monitoring for TTO, the permitting authority may allow dischargers to make the following certification statement: "Based on my inquiry of the person or persons directly responsible for managing compliance with the permit limitation (or pretreatment standard) for total toxic organics (TTO), I certify that, to the best of my knowledge and belief, no dumping of concentrated toxic organics into the wastewaters has occurred since the filing of the last discharge monitoring report. I further certify that this facility is implementing the toxic organic management plan submitted to the Louisiana Department of Environmental Quality, Office of Environmental Services."

This statement is to be included as a "comment" on the Discharge Monitoring Report. If monitoring is necessary to measure compliance with the TTO standard, the industrial discharger need analyze for only those pollutants which would reasonably be expected to be present.

TOXIC SOLVENT MANAGEMENT PLAN REQUIREMENT

In requesting the certification alternative mentioned above, the permittee shall prepare, implement, maintain, and submit to the Louisiana Department of Environmental Quality, Office of Environmental Services a toxic solvent management plan within ninety (90) days of the effective date of the permit. The plan shall include a list of the toxic organic compounds used; method of disposal used, instead of dumping, such as reclamation, contract hauling or incinerations; and procedures for ensuring that toxic organics do not routinely spill or leak into the wastewater.

STORM WATER POLLUTION PREVENTION PLAN (SWP3) REQUIREMENT

A SWP3 is included in the permit because in accordance with LAC 33:IX.2511.A.1, storm water discharges shall not be required to obtain an LPDES permit "... except... discharges associated with industrial activity." In accordance with LAC 33:IX.2511.B.14.a-k, facilities classified as SIC code 3471 are considered to have storm water discharges associated with industrial activity.

For first time permit issuance, the SWP3 shall be prepared, implemented, and maintained within six (6) months of the effective date of the final permit. **For renewal permit issuance**, the SWP3 shall be reviewed and updated, if necessary, within six (6) months of the effective date of the final permit. The plan should identify potential sources of storm water pollution and ensure the implementation of practices to prevent and reduce pollutants in storm water discharges associated with industrial activity at the facility (see Narrative Requirements for the AI).